## RECEIVED CENTRAL FAX CENTER

## **CURRENT LISTING OF CLAIMS**

1. (currently amended) A compound according to formula I

wherein

R<sup>1</sup> is selected from the group consisting of C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>3-6</sub> alkenyl, C<sub>3-6</sub> alkynyl, C<sub>3-7</sub> cycloalkyl, C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl, phenyl and benzyl, wherein, said phenyl and said benzyl optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>1-6</sub> alkoxy,

C<sub>1-6</sub> haloalkoxy, C<sub>1-6</sub> alkylthio, nitro, halogen and cyano;

R<sup>2</sup> is phenyl or pyridyl optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> alkoxycarbonyl, and CONR<sup>6</sup>R<sup>7</sup>;

 $R^3$  is substituted  $C_{1-6}$  alkyl, substituted  $C_{1-3}$  alkoxy- $C_{1-3}$  alkyl, substituted  $C_{3-6}$  alkenyl,  $C_{3-7}$  cycloalkyl, optionally substituted  $C_{1-}$  alkoxy,  $(CH_2)_0R^5$ ,  $CH(OH)R^5$ ,  $-(CH_2)_0-O-(CH_2)_0R^5$ ,  $NR^6R^7$ , C(=Y)Z[[,]] or -X(C=Y)Z-OF-Ha-e;

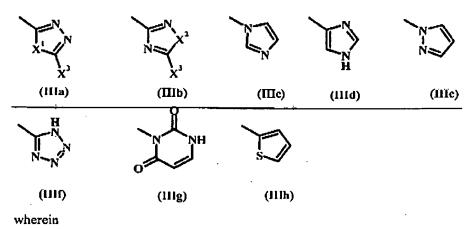
wherein,

said alkyl, said  $C_{1-3}$  alkoxy- $C_{1-3}$  alkyl and said alkenyl are substituted by -OH, -NR<sup>6</sup>R<sup>7</sup>, -C(=Y)Z, -X(C-Y)Z, CN, -S(O)<sub>q</sub>-C<sub>1-6</sub> alkyl; -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup>, -SO<sub>2</sub>Nl INH<sub>2</sub>, or -NR<sup>6</sup>SO<sub>2</sub>-C<sub>1-6</sub> alkyl;

said alkoxy is optionally substituted by -OH, -NR<sup>6</sup>R<sup>7</sup>, -C(=Y)Z, -X(C=Y)Z, -S(O)<sub>q</sub>-C<sub>1-6</sub> alkyl; -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> or -SO<sub>2</sub>NHNH<sub>2</sub>;

Rt2-is-hydrogen, Chalkyl or- C(-Y)Z;

R<sup>3</sup> is a phonyl-or a heteroaryl ring according to formula III a said phenyl and said heteroaryl ring optionally substituted with halo, -QR<sup>6</sup>, -NR<sup>6</sup>R<sup>7</sup>, -C(=O)Z, -X(C=O)Z;



X<sup>+</sup> is selected from the group consisting of -R<sup>10</sup>C=CR<sup>10a</sup>-, +O-, -S-, -NR<sup>5</sup>-and -CHR<sup>6</sup>;

X<sup>2</sup> is selected from the group consisting of -R<sup>10</sup>C=CR<sup>10a</sup>-, -O-, -S-, and

X3 is selected from the group consisting of hydrogen, hydroxyl and thiol;

-CHR6-:

wherein,

R<sup>10</sup> and R<sup>10a</sup> are independently are selected from the group consisting of hydrogen or C<sub>1-6</sub> alkyl optionally substituted with one or two substituents independently selected from the group consisting of hydroxy, C<sub>1-6</sub> alkoxy, thiol, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-6</sub> alkylsulfinyl, C<sub>1-3</sub> alkylsulfinyl, C<sub>1-3</sub> alkylsulfinyl, and C<sub>1-3</sub> alkylamino C<sub>1-3</sub> alkyl; and C<sub>1-3</sub> dialkylamino C<sub>1-3</sub> alkyl;

said phonyl and said heteroaryl ring is optionally substituted with halo,  $-QR^6$ ,  $-NR^6R^7$ , -C(-Q)Z, -X(C-Q)Z

 $R^4$  is  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl,  $C_{2-6}$  alkynyl[[,]]- $C_{2-7}$  cycloulkyl,  $C_{1-2}$  alkoxy- $C_{1-2}$  alkyl,  $C_{1-6}$  alkyl,  $C_{1-6}$  alkoxy- $C_{1-2}$  alkyl,  $C_{1-6}$  alkyl,

said alkyl, said alkenyl[[,]] and said alkynyl and said eyoloalkyl are optionally substituted by -OH, -OR<sup>6</sup>, -NR<sup>8</sup>R<sup>9</sup>, -C(=Y)Z, -X(C=Y)Z, -S(O)<sub>q</sub>-C<sub>1-6</sub>alkyl, -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> or -SO<sub>2</sub>NHNH<sub>2</sub>;

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R<sup>11</sup> is a phonyl or a heteroaryl ring selected from the group consisting of pyridinyl, pyrimidinyl pyrazinyl, pyrrole, imidazole, pyrazole and thiophene, said heteroaryl ring and said phonyl optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1,3</sub> alkyl, C<sub>1,3</sub> haloalkyl and C<sub>1,3</sub> alkoxy; or R<sup>11</sup> is N[(CH<sub>2</sub>)<sub>2</sub>]<sub>2</sub>W wherein W is selected from the group consisting of NR<sup>6</sup>, (CH<sub>2</sub>)<sub>2</sub>, N(C-O)Z, CHOR<sup>6</sup>, CHR<sup>6</sup>, CHNHC(-O)Z and CHNR<sup>6</sup>R<sup>2</sup>:

n, o, p and q are as defined below and s is 0 or 1;

- R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> (i) taken independently are selected from the group consisting of hydrogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> hydroxyalkyl, C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl C<sub>1-3</sub> alkylamino-C<sub>1-3</sub> alkyl and C<sub>1-3</sub> dialkylamino-C<sub>1-3</sub> alkyl or (ii) when both R<sup>6</sup>-and R<sup>7</sup> are attached to the same nitrogen atom they may be taken together, along with the nitrogen, to form a pyrrolidine, piperidine, piperazine or morpholine;
- X, and Y are independently O or NR6;
- Z is hydrogen, hydroxyl, C<sub>1.6</sub> alkoxy, NR<sup>6</sup>R<sup>13</sup>, C<sub>1.6</sub> alkyl, C<sub>1.3</sub> alkoxy-C<sub>1.3</sub> alkyl wherein R<sup>13</sup> is R<sup>7</sup> or phenyl optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1.3</sub> alkyl, C<sub>1.3</sub> haloalkyl and C<sub>1.3</sub> alkoxy;

n is 0 to 3;

o and p are independently 0 to 4 and  $o + p \le 5$ ;

q is 0 to 2; and,

k, r1 and r2-are independently 0 to 4, and  $5 \ge (r1 + r2) \ge 2$ ; and, acid addition salts, hydrates and solvates thereof; with the provise that when  $R^4$  is  $(GH_2)_n R^{11}$ , n is 1 and  $R^{11}$  is substituted phenyl,  $R^2$  is other-than-unsubstituted phenyl.

- 2. (currently amended) A compound according to claim I wherein:
  - R<sup>1</sup> is selected from the group consisting of C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>3-7</sub> cycloalkyl, C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl and optionally-substituted phenyl, and
  - R<sup>2</sup> is optionally substituted phenyl; and,
  - R<sup>4</sup> is C<sub>1-6</sub> alkyl[[,]] C<sub>2-7</sub> cycloalkyl, (CH<sub>3</sub>)<sub>6</sub>R<sup>11</sup>-or-(CH<sub>2</sub>)<sub>6</sub> O (CH<sub>2</sub>)<sub>p</sub>R<sup>11</sup>; wherein, said alkyl and said cycloalkyl are optionally substituted by-OH, -OR<sup>6</sup>, -NR<sup>8</sup>R<sup>9</sup>, -C(=Y)Z or -X(C=Y)Z[[;]].
  - R<sup>11</sup> is a phenyl optionally substituted with one to three groups independently solveted from the group consisting of halogen, cyano, C<sub>1,2</sub> alkyl, G<sub>1,2</sub> haloulkyl and C<sub>1,3</sub> alkoxy.

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- 3. (currently amended) A compound according to claim 2 wherein R<sup>3</sup> is substituted C<sub>1-6</sub> alkyl[[,]] Ha-e or -(CH<sub>3</sub>)<sub>n</sub>R<sup>5</sup>-wherein R<sup>3</sup> is HIa-HIh.
- 4. (original) A compound according to claim 2 wherein R<sup>3</sup> is -(CH<sub>2</sub>)<sub>n</sub>NR<sup>6</sup>R<sup>7</sup>, -(CH<sub>2</sub>)<sub>n</sub>C(=O)Z or -(CH<sub>2</sub>)<sub>n</sub>XC(=O)Z.

## 5 - 16. (canceled)

17. (currently amended) A pharmaceutical composition comprising a therapeutically effective quantity of a compound of formula I

$$R^{2} \longrightarrow N$$

$$N$$

$$R^{2} \longrightarrow N$$

$$R^{1}$$

wherein

- R<sup>1</sup> is selected from the group consisting of C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>3-6</sub> alkenyl, C<sub>3-6</sub> alkenyl, C<sub>3-6</sub> alkynyl, C<sub>3-7</sub> cycloalkyl, C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl, phenyl and benzyl, wherein, said phenyl and said benzyl optionally substituted with one to three substituents independently selected from the group consisting of C<sub>1-6</sub> alkyl, C<sub>1-6</sub> haloalkyl, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> haloalkoxy, C<sub>1-6</sub> alkylthio, nitro, halogen and cyano;
- R<sup>2</sup> is phenyl <del>or pyridyl</del> optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> alkoxy, C<sub>1-6</sub> alkoxycarbonyl, and CONR<sup>6</sup>R<sup>7</sup>;
- R<sup>3</sup> is substituted C<sub>1-6</sub> alkyl, substituted C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl, substituted C<sub>3-6</sub> alkenyl, C<sub>3-7</sub> cycloalkyl, optionally substituted C<sub>1-6</sub> alkoxy, -(CH<sub>2</sub>)<sub>n</sub>R<sup>5</sup>, -CH(OH)R<sup>5</sup>, -(CH<sub>2</sub>)<sub>0</sub>-O-(CH<sub>2</sub>)<sub>p</sub>R<sup>5</sup>, -NR<sup>6</sup>R<sup>7</sup>, -C(=Y)Z, or-X(C=Y)Z or-X(C=Y)Z or-X(C=Y)Z.

wherein,

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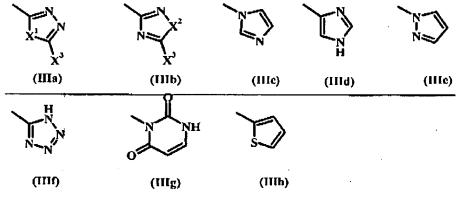
said alkyl, said  $C_{1-3}$  alkoxy- $C_{1-3}$  alkyl and said alkenyl are substituted by -OH, -NR<sup>6</sup>R<sup>7</sup>, -C(=Y)Z, -X(C=Y)Z, CN, -S(O)<sub>q</sub>-C<sub>1-6</sub>alkyl, -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup>, -SO<sub>2</sub>NHNH<sub>2</sub> or

-NR6SO2-C1-6alkyl;

said alkoxy is optionally substituted by -OH, -NR<sup>6</sup>R<sup>7</sup>, -C(=Y)Z, -X(C=Y)Z, -S(O)<sub>q</sub>-C<sub>1-6</sub> alkyl; -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> or -SO<sub>2</sub>NHNH<sub>2</sub>;

R12 is hydrogen, Chalkyl or -C(-Y)Z;

R<sup>5</sup> is a phenyl-or a heteroaryl ring according to formula IIIa IIIh optionally substituted with halo, -QR<sup>6</sup>, -NR<sup>6</sup>R<sup>7</sup>, -C(=O)Z, -X(C=O)Z;



wherein

X<sup>1</sup> is selected from the group consisting of R<sup>10</sup>C=CR<sup>100</sup>, O, S, NR<sup>6</sup> and -CHR<sup>6</sup>:

X2 is selected from the group consisting of R10C=CR100, O, S, and CHR0;

X<sup>3</sup> is selected from the group consisting of hydrogen, hydroxyl and thiol;

R<sup>10</sup> and R<sup>10a</sup> are independently are selected from the group consisting of hydrogen or C<sub>1.6</sub> alkyl optionally substituted with one or two substituents independently selected from the group consisting of hydroxy, C<sub>1.6</sub> alkoxy, thiol, C<sub>1.6</sub> alkylthio, C<sub>1.6</sub> alkylsulfinyl, C<sub>1.6</sub> alkylsulfonyl, halogen, amino, C<sub>1.6</sub> alkylamino, G<sub>1.6</sub> alkylamino, amino C<sub>1.3</sub> alkyl, C<sub>1.7</sub> alkylamino G<sub>1.3</sub> alkyl, and C<sub>1.3</sub> alkylamino C<sub>1.3</sub> alkyl;

suid phenyl and said heteroaryl ring optionally substituted with halo, OR<sup>6</sup>, -NR<sup>6</sup>R<sup>2</sup>, C(=O)Z, X(C=O)Z;

- $R^4$  is  $C_{1-6}$  alkyl,  $C_{2-6}$  alkenyl,  $C_{2-6}$  alkynyl,  $C_{2-7}$  eyoloalkyl,  $C_{1-3}$  alkoxy- $C_{1-3}$  alkyl, (CH<sub>2</sub>)<sub>0</sub>  $R^{1+}$  or -(CH<sub>2</sub>)<sub>0</sub>-O (CH<sub>2</sub>)<sub>0</sub>  $R^{1+}$ ; wherein,
  - said alkyl, said alkenyl[[,]] and said alkynyl and said eyeloalkyl are optionally substituted by -OH, -OR<sup>6</sup>, -NR<sup>8</sup>R<sup>9</sup>, -C(=Y)Z, -X(C=Y)Z, -S(O)<sub>q</sub>-C<sub>1-6</sub>alkyl, -SO<sub>2</sub>NR<sup>6</sup>R<sup>7</sup> or -SO<sub>2</sub>NHNH<sub>2</sub>;
  - R<sup>11</sup> is a phenyl or a heteroaryl ring selected from the group consisting of pyridinyl, pyrrimidinyl pyrazinyl, pyrrole, imidazole, pyrazole and thiophene, said heteroaryl ring and said phenyl optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1.3</sub> alkyl, C<sub>1.3</sub> haloalkyl and C<sub>1.3</sub> alkoxy; or R<sup>11</sup> is N[(CH<sub>2</sub>)<sub>2</sub>]<sub>2</sub>W wherein W is selected from the group consisting of NR<sup>6</sup>, (CH<sub>2</sub>)<sub>3</sub>, N(C=O)Z, CHOR<sup>6</sup>, CHR<sup>6</sup> CHNHC(=O)Z and CHNR<sup>6</sup>R<sup>7</sup>;

n, o, p and q are as defined below and s is 0 or 1;

- R<sup>6</sup>, R<sup>7</sup>, R<sup>8</sup> and R<sup>9</sup> (i) taken independently are hydrogen, C<sub>1-6</sub> alkyl, C<sub>1-6</sub> hydroxyalkyl, C<sub>1-3</sub> alkoxy-C<sub>1-3</sub> alkyl C<sub>1-3</sub> alkylamino-C<sub>1-3</sub>alkyl or C<sub>1-3</sub> dialkylamino-C<sub>1-3</sub>alkyl or C<sub>1-3</sub> dialkylamino-C<sub>1-3</sub>alkyl or C<sub>1-3</sub> alkyl or C<sub>1-3</sub> alkyl or C<sub>1-3</sub> alkyl or C<sub>1-3</sub> alkyl or C<sub>1-3</sub>alkyl o
- X, and Y are independently O or NR6;
- Z is hydrogen, hydroxyl, C<sub>1-6</sub>alkoxy, NR<sup>6</sup>R<sup>13</sup>, C<sub>1-6</sub>alkyl, C<sub>1-3</sub>alkoxy-C<sub>1-3</sub>alkyl wherein R<sup>13</sup> is R<sup>7</sup> or phenyl optionally substituted with one to three groups independently selected from the group consisting of halogen, cyano, C<sub>1-3</sub>alkyl, C<sub>1-3</sub>haloalkyl and C<sub>1-3</sub>alkoxy, n is 0 to 3;
- o and p are independently 0 to 4 and  $o + p \le 5$ ;

q is 0 to 2;

k, r1 and r2 are independently 0 to 4, and  $5 \ge (r1 + r2) \ge 2$ ; and

acid addition salts, hydrates and acid addition salts, hydrates and solvates thereof, with the proviso that when R<sup>4</sup> is (CH<sub>2</sub>)<sub>n</sub>R<sup>H</sup>, n is 1 and R<sup>H</sup> is substituted phenyl, R<sup>2</sup> is other than unsubstituted phenyl, in admixture with at least one pharmaceutically acceptable carrier or diluent sufficient upon administration in a single or multiple dose regimen for treating diseases mediated by human immunodeficiency virus or for inhibiting HIV.

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